Tire Science and Technology
Index to Volume 25
1997

Number	Months	Pages
1	Jan.–Mar.	1– 76
2	Apr.–Jun.	77–152
3	Jul.–Sep.	153–228
4	Oct.–Dec.	229–308

A

Abrasion
Effect of the environment on the wear of carbon-filled natural rubbers (Uchiyama, Han, and Iwai), Apr.–Jun., 137
Airbag model
Airbag tire modeling by the explicit finite element method (Wu, Gu, and Chen), Oct.–Dec., 288
Aircraft tire
Experimental results and analysis of aircraft tire-test drum interaction (Lindsley, Medzorian, and Padovan), Jan.–Mar., 43
Three-dimensional deformation comparison between F-16 bias and radial aircraft tires (Lin, Chawla, and Wagner), Jan.–Mar., 63
Aljundi, B. N.: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.

B

Barron, G. E.: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.
Bead seat
The use of tangential x-ray tools in the analysis of tire/wheel mismatch (Gerhardt, Fuller, Follen, and Schnuth), Apr.–Jun., 96
Boundary element method
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
Braking
Techniques for determining the parameters of a two-dimensional tire model for the study of ride comfort (Mancosu, Matrascia, and Cheli), Jul.–Sep., 187
Browell, J. T.,: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.
Brush model
Techniques for determining the parameters of a two-dimensional tire model for the study of ride comfort (Mancosu, Matrascia, and Cheli), Jul.–Sep., 187

C

Carbon black
Effect of the environment on the wear of carbon-filled natural

rubbers (Uchiyama, Han, and Iwai), Apr.–Jun., 137
Chawla, M. D.: *see* Lin, P. P., Chawla, M. D., and Wagner, P. M.
Cheli, F.: *see* Mancosu, F., Matrascia, G., and Cheli, F.
Chen, H.: *see* Wu, S. R., Gu, L., and Chen, H.
Composite materials
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2
Contact area
Experimental results and analysis of aircraft tire-test drum interaction (Lindsley, Medzorian, and Padovan), Jan.–Mar., 43
Contact pressure
Experimental results and analysis of aircraft tire-test drum interaction (Lindsley, Medzorian, and Padovan), Jan.–Mar., 43
Cord-rubber composite
Tire transient analysis with an explicit finite element program (Kao and Muthukrishnan), Oct.–Dec., 230
Cornering stiffness
Heavy truck handling performance analysis in vehicle test and computer simulation (Schröder and Duchow), Apr.–Jun., 119
Cylindrical coordinates
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2

D

Danielson, K. T. and Noor, A. K.: Finite elements developed in cylindrical coordinates for three-dimensional tire analysis, Jan.–Mar., 2
Deformations
Three-dimensional deformation comparison between F-16 bias and radial aircraft tires (Lin, Chawla, and Wagner), Jan.–Mar., 63
Driving
Techniques for determining the parameters of a two-dimensional tire model for the study of ride comfort (Mancosu, Matrascia, and Cheli), Jul.–Sep., 187
Duchow, A.: *see* Schröder, C. and Duchow, A.

E

Elastic lead
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Elastic trail
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Elastoplasticity
Friction mechanism of tread blocks on snow surfaces (Mundl, Meschke, and Liederer), Oct.–Dec., 245
Energy dissipation
Analysis of temperature distribution in a rolling tire due to strain energy dissipation (Park, Youn, Song, and Kim), Jul.–Sep., 214

F

Finite deformation

Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2
Finite elasticity
Tire transient analysis with an explicit finite element program (Kao and Muthukrishnan), Oct.–Dec., 230
Finite element analysis
Airbag tire modeling by the explicit finite element method (Wu, Gu, and Chen), Oct.–Dec., 288
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2
Friction mechanism of tread blocks on snow surfaces (Mundl, Meschke, and Liederer), Oct.–Dec., 245
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154
Tire transient analysis with an explicit finite element program (Kao and Muthukrishnan), Oct.–Dec., 230
Finite strain
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2
Fluid dynamics
Calculation of the hydroplaning of a deformable smooth-shaped and longitudinally grooved tire (Grogger and Weiss), Oct.–Dec., 265
Follen, G. D.: *see* Gerhardt, J. S., Fuller, R. L., Follen, G. D., and Schnuth, C. L.
Footprint
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Free-rolling tire
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Friction
Effect of the environment on the wear of carbon-filled natural rubbers (Uchiyama, Han, and Iwai), Apr.–Jun., 137
Fuller, R. L.: *see* Gerhardt, J. S., Fuller, R. L., Follen, G. D., and Schnuth, C. L.

G

Gamma rays
The use of tangential x-ray tools in the analysis of tire/wheel mismatch (Gerhardt, Fuller, Follen, and Schnuth), Apr.–Jun., 96
Gerhardt, J. S., Fuller, R. L., Follen, G. D., and Schnuth, C. L.: The use of tangential x-ray tools in the analysis of tire/wheel mismatch, Apr.–Jun., 96
Grogger, H. and Weiss, M.: Calculation of the hydroplaning of a deformable smooth-shaped and longitudinally grooved tire, Oct.–Dec., 265
Gu, L.: *see* Wu, S. R., Gu, L., and Chen, H.

H

Han, Y.: *see* Uchiyama, Y., Han, Y., and Iwai, T.

Harshness
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
Heat generation
Analysis of temperature distribution in a rolling tire due to strain energy dissipation (Park, Youn, Song, and Kim), Jul.–Sep., 214
High-speed computing
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154
Hydroplaning
Calculation of the hydroplaning of a deformable smooth-shaped and longitudinally grooved tire (Grogger and Weiss), Oct.–Dec., 265
Hyperelasticity
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154

I

Iterative solver
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154
Iwai, T.: *see* Uchiyama, Y., Han, Y., and Iwai, T.

K

Kao, B. G. and Muthukrishnan, M.: Tire transient analysis with an explicit finite element program, Oct.–Dec., 230
Kim, N.-J.: *see* Park, H. C., Youn, S.-K., Song, T. S., and Kim, N.-J.
Kovac, Frederick J., In memory of, Jan.–Mar., 76

L

Lazeration, J. J.: An investigation of the slip of a tire tread, Apr.–Jun., 78
Lee, J. J. and Ni, A. E.: Structure-borne tire noise statistical energy analysis, Jul.–Sep., 177
Liederer, W.: *see* Mundl, R., Meschke, G., and Liederer, W.
Lift force
Calculation of the hydroplaning of a deformable smooth-shaped and longitudinally grooved tire (Grogger and Weiss), Oct.–Dec., 265
Lin, P. P., Chawla, M. D., and Wagner, P. M.: Three-dimensional deformation comparison between F-16 bias and radial aircraft tires, Jan.–Mar., 63
Lindsley, N., Medzorian, J., and Padovan, J.: Experimental results and analysis of aircraft tire-test drum interaction, Jan.–Mar., 43

M

Mallard, N. E.: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E.,

Browell, J. T., and Aljundi, B. N.

Mancosu, F., Matrascia, G., and Cheli, F.: Techniques for determining the parameters of a two-dimensional tire model for the study of ride comfort, Jul.–Sep., 187

Mang, H. A.: *see* Meschke, G., Payer, H. J., and Mang, H. A.

Matrascia, G.: *see* Mancosu, F., Matrascia, G., and Cheli, F.

Medzorian, J.: *see* Lindsley, N., Medzorian, J., and Padovan, J.

Meschke, G.: *see* Mundl, R., Meschke, G., and Liederer, W.

Meschke, G., Payer, H. J., and Mang, H. A.: 3D simulations of automobile tires: material modeling, mesh generation, and solution strategies, Jul.–Sep., 154

Mesh generation
  3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154

Mismatch mounting
  The use of tangential x-ray tools in the analysis of tire/wheel mismatch (Gerhardt, Fuller, Follen, and Schnuth), Apr.–Jun., 96

Moment
  Heavy truck handling performance analysis in vehicle test and computer simulation (Schröder and Duchow), Apr.–Jun., 119

Mundl, R., Meschke, G., and Liederer, W.: Friction mechanism of tread blocks on snow surfaces, Oct.–Dec., 245

Muthukrishnan, M.: *see* Kao, B. G. and Muthukrishnan, M.

N

Natural rubber
  Effect of the environment on the wear of carbon-filled natural rubbers (Uchiyama, Han, and Iwai), Apr.–Jun., 137

Ni, A. E.: *see* Lee, J. J. and Ni, A. E.

Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.: Radiated noise from tire/wheel vibration, Jan.–Mar., 29

Noise
  Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29

Noor, A. K.: *see* Danielson, K. T. and Noor, A. K.

O

Optical fringe projection
  Three-dimensional deformation comparison between F-16 bias and radial aircraft tires (Lin, Chawla, and Wagner), Jan.–Mar., 63

P

Padovan, J.: *see* Lindsley, N., Medzorian, J., and Padovan, J.

Park, H. C., Youn, S.-K., Song, T. S., and Kim, N.-J.: Analysis of temperature distribution in a rolling tire due to strain energy dissipation, Jul.–Sep., 214

Payer, H. J.: *see* Meschke, G., Payer, H. J., and Mang, H. A.
Point mobility
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177

R

Rebar element
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154
Ride comfort
Techniques for determining the parameters of a two-dimensional tire model for the study of ride comfort (Mancosu, Matrascia, and Cheli), Jul.–Sep., 187
Ridha, R. A.: In memory of Frederick J. Kovac, Jan.–Mar., 76
Road noise
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Rubber elasticity
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2

S

Schnuth, C. L.: *see* Gerhardt, J. S., Fuller, R. L., Follen, G. D., and Schnuth, C. L.
Schröder, C. and Duchow, A.: Heavy truck handling performance analysis in vehicle test and computer simulation, Apr.–Jun., 119
Self-aligning torque
Heavy truck handling performance analysis in vehicle test and computer simulation (Schröder and Duchow), Apr.–Jun., 119
Snow grip
Friction mechanism of tread blocks on snow surfaces (Mundl, Meschke, and Liederer), Oct.–Dec., 245
Snow model
Friction mechanism of tread blocks on snow surfaces (Mundl, Meschke, and Liederer), Oct.–Dec., 245
Snyder, D. S.: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.
Song, T. S.: *see* Park, H. C., Youn, S.-K., Song, T. S., and Kim, N.-J.
Sound pressure level
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
Statistical energy analysis
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Structure-borne noise
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Surface curvature
Experimental results and analysis of aircraft tire-test drum interaction (Lindsley, Medzorian, and Padovan), Jan.–Mar., 43

T

Tire
Airbag tire modeling by the explicit finite element method (Wu, Gu, and Chen), Oct.–Dec., 288
Analysis of temperature distribution in a rolling tire due to strain energy dissipation (Park, Youn, Song, and Kim), Jul.–Sep., 214
Calculation of the hydroplaning of a deformable smooth-shaped and longitudinally grooved tire (Grogger and Weiss), Oct.–Dec., 265
Finite elements developed in cylindrical coordinates for three-dimensional tire analysis (Danielson and Noor), Jan.–Mar., 2
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
The use of tangential x-ray tools in the analysis of tire/wheel mismatch (Gerhardt, Fuller, Follen, and Schnuth), Apr.–Jun., 96
3D simulations of automobile tires: material modeling, mesh generation, and solution strategies (Meschke, Payer, and Mang), Jul.–Sep., 154
Tire transient analysis with an explicit finite element program (Kao and Muthukrishnan), Oct.–Dec., 230
Tire force
Heavy truck handling performance analysis in vehicle test and computer simulation (Schröder and Duchow), Apr.–Jun., 119
Tire model
Techniques for determining the parameters of a two-dimensioinal tire model for the study of ride comfort (Mancosu, Matrascia, and Cheli), Jul.–Sep., 187
Tire noise
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Transfer function
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Transient analysis
Tire transient analysis with an explicit finite element program (Kao and Muthukrishnan), Oct.–Dec., 230
Tread block
Friction mechanism of tread blocks on snow surfaces (Mundl, Meschke, and Liederer), Oct.–Dec., 245
Tread slip
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Tread vibration
Structure-borne tire noise statistical energy analysis (Lee and Ni), Jul.–Sep., 177
Treadwear
An investigation of the slip of a tire tread (Lazeration), Apr.–Jun., 78
Truck tire
Heavy truck handling performance analysis in vehicle test and computer simulation (Schröder and Duchow), Apr.–Jun., 119

U

Uchiyama, Y., Han, Y., and Iwai,

T.: Effect of the environment on the wear of carbon-filled natural rubbers, Apr.–Jun., 137

V

Vibration
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
Viscoelasticity
Analysis of temperature distribution in a rolling tire due to strain energy dissipation (Park, Youn, Song, and Kim), Jul.–Sep., 214

W

Wagner, P. M.: *see* Lin, P. P., Chawla, M. D., and Wagner, P. M.
Walton, G. F.: *see* Ni, E.-J., Snyder, D. S., Walton, G. F., Mallard, N. E., Barron, G. E., Browell, J. T., and Aljundi, B. N.
Wear
Effect of the environment on the wear of carbon-filled natural rubbers (Uchiyama, Han, and Iwai), Apr.–Jun., 137
Weiss, M.: *see* Grogger, H. and Weiss, M.
Wheel
Radiated noise from tire/wheel vibration (Ni, Snyder, Walton, Mallard, Barron, Browell, and Aljundi), Jan.–Mar., 29
Wu, S. R., Gu., L., and Chen, H.: Airbag tire modeling by the explicit finite element method, Oct.–Dec., 288

X

X-ray
The use of tangential x-ray tools in the analysis of tire/wheel mismatch (Gerhardt, Fuller, Follen, and Schnuth), Apr.–Jun., 96

Y

Youn, S.-K.: *see* Park, H. C., Youn, S.-K., Song, T. S., and Kim, N.-J.